

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 04-162418

(43)Date of publication of application : 05.06.1992

(51)Int.CI

H01L 21/205

(21)Application number : 02-286469

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(22)Date of filing : 24.10.1990

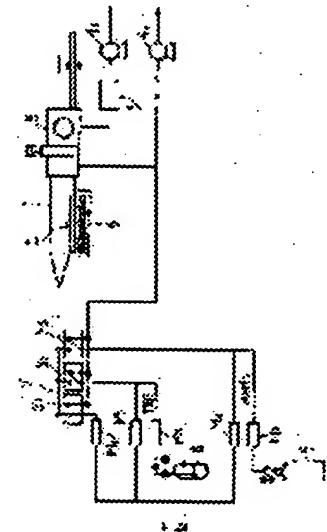
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## (54) CHEMICAL VAPOR GROWTH METHOD

### (57)Abstract:

**PURPOSE:** To form a uniform layer controlled in an atomic layer order easily on a substrate having a large area by setting at least one kind of concentration of a raw material gas within a range, in which the rate of change of a growth rate in the relationship of the growth rate of the layer to one kind of raw-material gas concentration is not increased substantially, and supplying the raw material gas.

**CONSTITUTION:** The inside of a reaction tube 1 is exhausted by a rotary pump 42. A turbo-molecular pump 3 and a rotary pump 41 exhaust a load locking mechanism for sending a substrate crystal 2 into or out from the inside of the reaction tube 1. A numeral 6 represents a heater for heating the substrate crystal 2. A manifold 7 is connected at one end of the reaction tube 1, and flow-path changeover valves S1, S2, S3 are bonded with each branch section. A growth rate increases in approximately proportional to TEG concentration within a range, in which the concentration of TEG is low, the growth rate is not proportional to TEG concentration within a range, in which TEG concentration is higher, and the growth rate is kept approximately constant when TEG concentration exceeds  $20 \times 10^{-4}$  in terms of molar fraction.



### LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]